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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,155	06/04/2001	Jae-seong Shim	1293.1206	8787

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EXAMINER

NGUYEN, DUNG X

ART UNIT PAPER NUMBER

2638

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,155

Applicant(s)

SHIM ET AL.

Examiner

Dung X. Nguyen

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 7, 8, 10, and 11 is/are allowed.
- 6) ☒ Claim(s) 5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments filed on December 27, 2004 have been fully considered and are persuasive. The rejection of the Office action filed on September 27, 2004 has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new reference(s).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 5 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya et al. (US patent # 6,256,003 B1), and further in view of Yamaguchi et al. (US patent 6,687,629 B1).

Regarding claim 5, Tsuchiya et al. discloses (figure 4):

- An edge detector detecting edges of the digital signal by inherently determining when signs of consecutive same points of the digital signal are different from each other, and in response, outputting first and second edge detection signals (column 2, lines 33 – 46, specially column 2, lines 40 - 43);
- A jitter determining circuit determining the jitter from the first and second edge signals (column 2, lines 57 – 64, jitter is inherently detected or determined in order for correction to take place, column 2, lines 43 – 45).

Tsuchiya et al. differs from the instant claimed invention that it does not show the steps of a jitter detecting circuit to detect jitter from analog signal converted to a digital signal.

However, Yamaguchi et al. discloses (figure 32) that blocks 11, 12, 13 corresponding to a jitter detecting circuit to detect jitter from analog signal converted to a digital signal (ADC) (column 22, lines 43 – 58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Tsuchiya et al. and Yamaguchi et al. to provide the requirements of the instant claimed invention for measuring a jitter used in a microcomputer (column 1, lines 12 – 16 of Yamaguchi et al.).

Allowable Subject Matter

4. **Claim 6 is objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. **Claims 1 - 4, 7, 8 10, and 11 are allowed.** The following is a statement of reasons for the indication of allowable subject matter:

Regarding to the claimed invention, the prior art of record fails to show or render obvious of a jitter detecting circuit for an A/D converter, comprising:

- An edge detector for receiving from consecutive sampling points of the digitally converted input signal, and outputting two signals if the signs are different from each other;
- A comparator for outputting a smaller absolute value signal;
- An operating unit for dividing the absolute value output from the comparator by a sum of the absolute value of the first and second edge signals; and
- An accumulator for accumulating outputs of the operating unit during a predetermined period.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cloutier (5,790,543) discloses an apparatus and its corresponding method for correcting jitter in data packets.

Jennes et al. (US patent # 5,717,469) discloses a video frame grabber comprising analog video signals analysis system.

Contact Information

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Vanderpuye Kenneth N. can be reached on (571) 272-3078. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN

July 12, 2005


KENNETH VANDERPUYE
PRIMARY EXAMINER